

REMARKS

Claims 1-3, 5-7, 9-11, 13 and 16-19 are pending in this application. By this Amendment, claims 1, 5, 9, 13 and 16-19 are amended and claims 4, 8, 12 and 14 are canceled. No new matter is added.

Claims 1-3, 5-7, 9-11, 13 and 16-19 were rejected under 35 U.S.C. §103(a) over Shomura, U.S. Patent No. 6,170,465, in view of Ishikawa et al., U.S. Patent No. 6,975,934, Mashiki, U.S. Patent No. 6,176,220, and Sugiyama et al., U.S. Patent No. 6,792,901. The features from canceled claim 14 have been incorporated into the independent claims, rendering the rejection moot.

Claims 4, 8 and 12 were rejected under 35 U.S.C. §103(a) over Shomura in view of Ishikawa, Mashiki, Sugiyama and Maloney, U.S. Patent No. 6,481,273. Claims 4, 8 and 12 have been cancelled, rendering the rejection moot.

Claim 14 was rejected under 35 U.S.C. §103(a) over Shomura, in view of Ishikawa, Mashiki, Sugiyama, Maloney and Yomogida, U.S. Patent No. 6,513,496. The rejection is respectfully traversed with respect to claims 1, 5, 9, 13 and 16-19, which have been amended to incorporate the features of cancelled claim 14.

Claim 1 recites an injection amount control means that periodically increases or decreases the fuel injection amount from the injection amount for stoichiometric operation by a predetermined amount at a frequency outside the range of human perception. Independent claims 5, 9, 13 and 16-19 recite similar features. The Office Action, on page 26, alleges that Yomogida discloses a system wherein an injection amount control means periodically changes the fuel injection amount at a frequency outside the range of human perception. Applicant respectfully disagrees.

In rejecting canceled claim 14, the Office Action cites Yomogida's abstract. Yomogida's abstract explains that the combustion condition does not change suddenly and the

engine does not vibrate. Applicant respectfully asserts that this does not teach or suggest the above referenced features of independent of claim 1 because vibration is only one aspect of an engine's operation that could be detected by human perception. Further, simply because the engine does not vibrate does not mean that a human can not perceive the changes to the engine's performance. Further, Yomogida does not teach or suggest that human perception is of concern. Further, one of ordinary skill in the art would understand that unnecessary vibrations can be destructive to mechanical components and thus reducing vibration is completely separate and distinct from preventing changes in the operation of an engine that occur at a frequency outside the range of human perception.

Additionally, Applicant respectfully asserts that the present invention provides benefits that were not previously recognized in the prior art. The present invention provides an intake air amount variation detector that is capable of accurately detecting the intake air amount variations among the cylinders, which was not previously available in the prior art. See, for example, page 3 of the originally submitted specification. Thus, the claims recite a combination of elements that together provide a synergistic result as compared to the individual elements found in the prior art. The elements in combination do not merely perform the function that each element performs separately. See MPEP §2141(V).

Applicant respectfully asserts that the combination of all six of Shomura, Ishikawa, Mashiki, Sugiyama, Maloney and Yomogida as applied to reject claim 14 could only have been arrived at through impermissible hindsight. Applicant acknowledges that obviousness is in a sense necessarily a reconstruction based on hindsight reasoning, but the combination of the six applied references involves knowledge only gleaned from Applicant's specification. Applicant acknowledges that there is no limit to the number of references that can be combined for an obviousness rejection. But Applicant does not believe that one of ordinary skill in the art would have selectively sought out the six applied references and combined

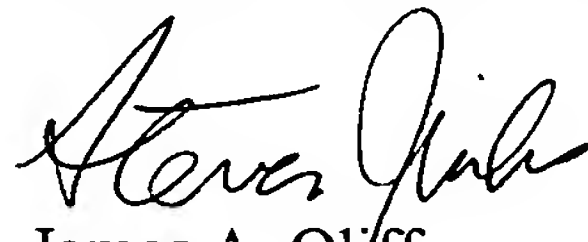
them without the aid of Applicant's specification because, outside of Applicant's specification, there is no motivation to combine all six references.

It is respectfully requested that the rejection be withdrawn.

In view of the foregoing, it is respectfully submitted that this application is in condition for allowance. Favorable reconsideration and prompt allowance are earnestly solicited.

Should the Examiner believe that anything further would be desirable in order to place this application in even better condition for allowance, the Examiner is invited to contact the undersigned at the telephone number set forth below.

Respectfully submitted,



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Attachment:
Request for Continued Examination

Date: May 18, 2009

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